

CLAIMS

1. A power amplifier circuit comprising:

first and second cascade-assembled operational amplifiers having respective first inputs receiving a reference voltage across a decoupling capacitor, respective outputs of which are connected across a load and are looped back on respective second inputs, the
5 second input of the first amplifier receiving, from a coupling capacitor, an input voltage to be amplified,

first elements for charging, upon power-on, the coupling capacitor to a first level set by a predetermined voltage at most equal to the reference voltage; and

10 second elements separate from the first elements for charging, upon power-on, the decoupling capacitor to a second level set by said reference voltage,

wherein the first elements comprise a controllable resistive bridge.

2. The circuit of claim 1, wherein at an end of the separate charging, a
15 difference between a voltage across the coupling capacitor and a voltage across the decoupling capacitor is negligible as compared to the sensitivities and offset voltages of the amplifiers, so that a subsequent balancing of capacitor charge levels ranges between approximately 0.03 and 0.07 s.

20 3. The circuit of claim 2, wherein the difference between the voltage across the coupling capacitor and the voltage across the decoupling capacitor at the end of the separate charging is zero.

25 4. The circuit of claim 2, wherein said amplifiers are enabled after a predetermined time interval which follows the separate charging.

5. The circuit of claim 2, comprising devices capable of balancing the voltages across the capacitors at the end of the separate charging.

30 6. The circuit of claim 1, wherein said amplifiers are inhibited at least as long as the voltage across the decoupling capacitor is smaller than the reference voltage.

7. The circuit of claim 1, wherein the first and second elements are deactivated when the voltage across the decoupling capacitor reaches said reference voltage.

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8. The circuit of claim 1, wherein the first elements comprise a controllable bias circuit having its output connected to a terminal of the coupling capacitor distal from a terminal receiving the input voltage, the bias circuit being connected to a supply terminal of said circuit.

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9. The circuit of claim 1, wherein the second elements comprise a controllable current source, connected between a high supply terminal and the first inputs of said amplifiers.

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10. The circuit of claim 1, wherein the power amplifier circuit comprises a first control circuit providing a control signal for controlling at least the first and second elements, which switches when the voltage across the decoupling capacitor reaches the reference voltage.

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11. The circuit of claim 10, wherein said control signal is also provided on inhibition terminals of said amplifiers.

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12. The circuit of claim 10, wherein a switch connects the output of the first operational amplifier to its second input, the output of a second control circuit controlling the switch to an on state during a predetermined time interval from an interruption of the separate charging.

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13. The circuit of claim 12, wherein the second control circuit comprises a timing circuit setting said time interval and receiving as an input said control signal and a logic combination circuit receiving as an input said control signal and an output signal of said timing circuit, the output of the combination circuit forming the output of said

second control circuit.

14. A power amplifier comprising:

first and second operational amplifiers having respective first inputs receiving a
5 reference voltage across a decoupling capacitor and respective outputs connected across a
load and looped back to respective second inputs, the second input of the first operational
amplifier receiving, through a coupling capacitor, an input voltage to be amplified;

a first circuit configured to charge the coupling capacitor in response to a control
signal; and

10 a second circuit configured to charge the decoupling capacitor in response to the
control signal.

15 15. A power amplifier as defined in claim 14, wherein the first and second
circuits are configured to separately charge the coupling capacitor and the decoupling
capacitor, respectively, upon power-on from an off or standby state.

16. A power amplifier as defined in claim 15, further comprising a third circuit
configured to inhibit the first operational amplifier during the separate charging.

20 17. A power amplifier as defined in claim 16, wherein the third circuit is
configured for enabling the first operational amplifier after a predetermined time interval
which follows the separate charging.

25 18. A power amplifier as defined in claim 16, wherein the first operational
amplifier is inhibited at least as long as the voltage across the decoupling capacitor is less
than the reference voltage.

30 19. A power amplifier as defined in claim 14, wherein the first circuit is
configured to charge the coupling capacitor to a first level set by a predetermined voltage
at most equal to the reference voltage and the second circuit is configured to charge the
decoupling capacitor to a second level set by the reference voltage.

20. A power amplifier as defined in claim 19, wherein the first and second circuits are deactivated when the voltage across coupling capacitor reaches the reference voltage.

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21. A power amplifier as defined in claim 19, wherein the first circuit comprises a controllable bias circuit having its output coupled to a terminal of the coupling capacitor opposite from a terminal receiving the input voltage, the bias circuit being connected to a supply terminal.

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22. A power amplifier as defined in claim 19, wherein the second circuit comprises a controllable current source connected between a supply terminal and the first inputs of the first and second operational amplifiers.

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23. A power amplifier as defined in claim 19, further comprising a first control circuit configured to provide a control signal for controlling the first and second circuits, which switches when the voltage across the decoupling capacitor reaches the reference voltage.

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24. A power amplifier as defined in claim 23, further comprising a switch connecting the output and the second input of the first operational amplifier, wherein the output of a second control circuit controls the switch to an on state during a predetermined time interval after the end of the separate charging.

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25. A power amplifier as defined in claim 24, wherein the second control circuit comprises a timing circuit setting said predetermined time interval and receiving as an input said control signal, and a logic circuit receiving as an input said control signal and an output signal of the timing circuit, the output of the logic circuit forming the output of the second control circuit.

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26. A method for operating a power amplifier comprising first and second

operational amplifiers having respective first inputs receiving a reference voltage across a decoupling capacitor and respective outputs connected across a load and looped back to respective second inputs, the second input of the first amplifier receiving through a coupling capacitor an input voltage to be amplified, said method comprising:

- 5 separately charging the coupling and decoupling capacitors upon power-on from and off or standby state.

27. A method as defined in claim 26, further comprising inhibiting the first and second operational amplifiers during the separate charging.

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28. A method as defined in claim 27, further comprising enabling the first and second operational amplifiers after a predetermined time interval which follows the separate charging.

- 15 29. A method as defined in claim 26, wherein separately charging the coupling and decoupling capacitors comprises charging the coupling capacitor to a first level set by a predetermined voltage at most equal to the reference voltage, and charging the decoupling capacitor to a second level set by the reference voltage.

- 20 30. A method as defined in claim 29, further comprising deactivating charging of the coupling and decoupling capacitors when the voltage across the decoupling capacitors reach the reference voltage.